



Architecture Reviews

Overview –

June 2018





What would ya sayyyyy ya do here at VITA?



- As a management discipline EA's:
 - Produce pictures, diagrams, plans, and roadmaps that...

Describe the structure of the enterprise, explain current limitations, and show how changes could make things better.





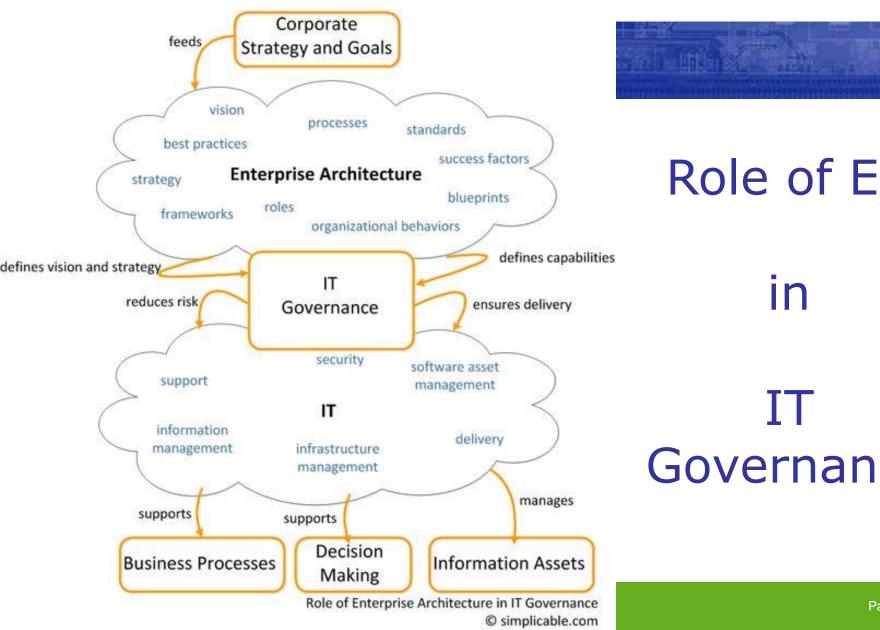
What would ya sayyyyy ya do here at VITA?



- **As a process**, EA's follow architecture development processes for creation, change, and management.
 - EA's take into account the opinions and views of all stakeholders.
 - EA's make best use of available resources and investments.







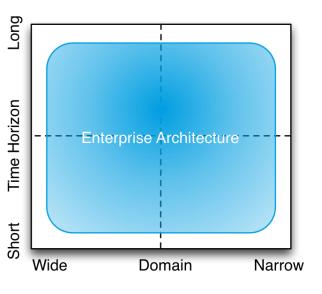
Role of EA

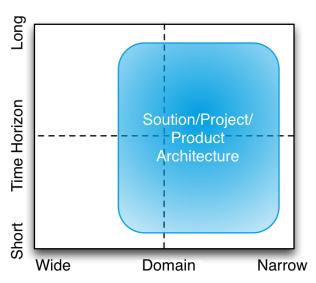
Governance

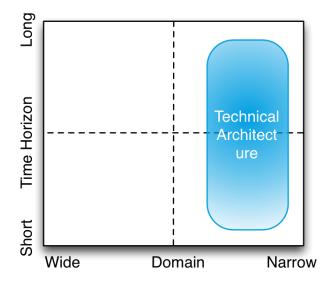




Roles Within Enterprise Architecture



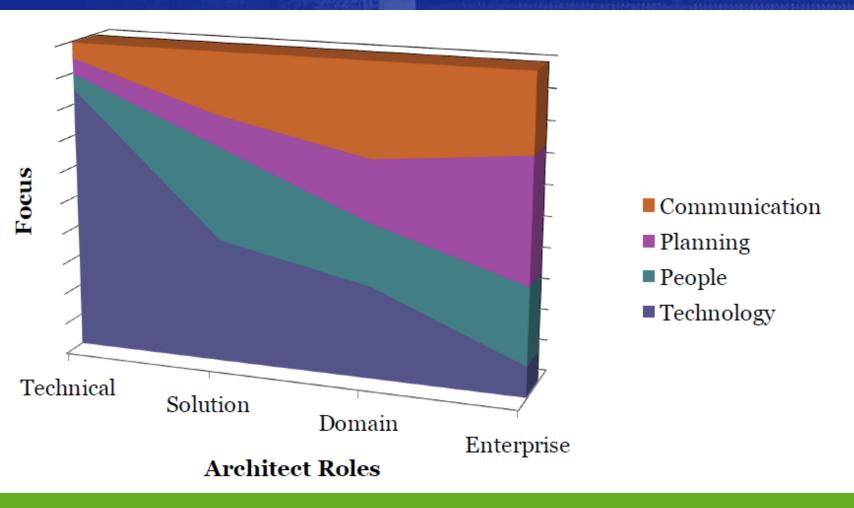






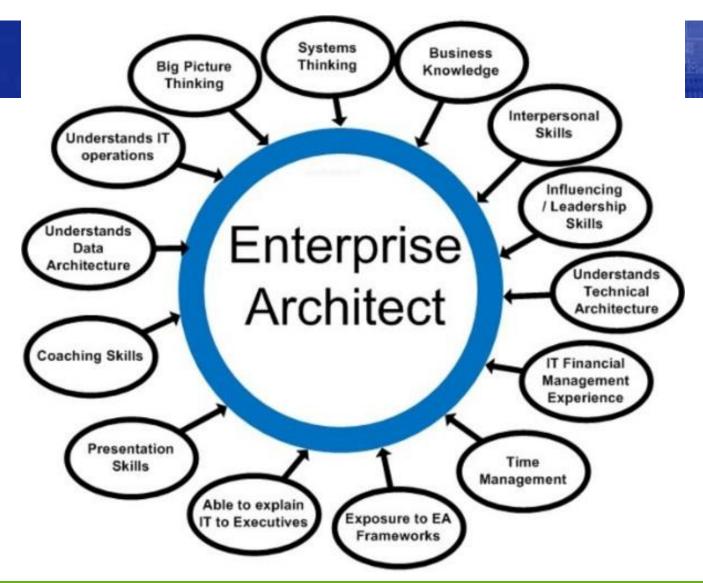


Focus of Enterprise Architect Roles













Architecture Reviews Overview

- VITA Architecture Review (VAR) occurs as part of multiple governance processes.
 - Policies, Standards, and Guidelines (PGR).
 - IT Strategic Plans and Amendments.
 - Project Initiation.
 - Request for Proposal (RFP) / Invitation for Bid (IFB).
 - Contracts.





Architecture Qualities

- Architecture reviews consider all enterprise factors influencing the requested change
- Goal is to end up with considerations to successfully integrate the change into the VITA enterprise.

- Performance
- Scalability
- Security
- Availability
- Resilience
- Evolution
- Maintainability
- Supportability
- Geographical Distribution
- Efficiency
- Time to Deliver
- Reliability
- Cost
- etc...





How Much Architecture Reviewing is Enough?

- Depends on risks because architecture is there to mitigate risks.
- Continue architecture until the risks are appropriately mitigated.
- When stakeholders are confident then that is probably enough.





Arch Review Objectives and Intent

- Support compliance with Security and Enterprise Architecture.
 - New IT investments must comply with ITRM requirements and Technology Standards to support a robust and capable enterprise.
 - Allows agencies to transform their enterprises in a controlled manner to meet COV goals and objectives.



Architecture Review Business Drivers

- ITRM requirements
- Enterprise constraints
- Technology standards
- Technology stacks
- Technology trends
- Support (vendor or equivalent)





ITRM Requirements Drivers

- Information Technology Resource Management (ITRM) Policies, Standards and Guidelines
 - -ITRM Wide and Supporting Documents
 - -Information Technology Resource Management Policy (GOV102-02)
 - -Policy, Standard and Guideline Formulation Standard (GOV101-02)





ITRM Requirements Drivers cont...

- -COV ITRM Glossary (Version 2.2) (06/07/2017) A single comprehensive glossary that supports Commonwealth Information Technology Resource Management (ITRM) documents.
- -COV ITRM Policies, Guidelines, Standards (PSGs) Brief & Supporting Documents (12/08/2015).





ITRM Requirements Drivers cont...

- Enterprise Architecture
 - -EA provides the framework for establishing comprehensive requirements for ITRM.
 - -EA Policy (EA 200) and EA Standard (EA 225) address all of architecture components.
- •GIS, Operations, Security, Project/Program/Supply-Chain Management, etc.





Enterprise Constraint Drivers

- Constrain by adhering to standards
 - -Is this change good for the enterprise?
 - -Standards may seem a hindrance to some, but constraints, especially in the IT arena, drastically lower support costs.





Enterprise Constraint Drivers cont...

-Allow IT staff opportunity to do one thing, and do it well, versus having to support a wide-variety of differing standards, but doing none of them necessarily well.

~Gartner - The Unexpected Case...





Enterprise Constraint Drivers cont...

- Constrain deviations from standards
 - -Architectures are not set in stone.
 - -Perhaps the exception is a signal the standard needs to be revisited.
 - Intent is to be flexible to meet agency needs.





Technology Standards Drivers

 Indicate what technologies or products may be acquired / deployed at a particular point in time





Technology Standards Drivers cont...

- EA Technology Component Standard Tables
 - -Strategic
 - -Emerging
 - -Transitional / Contained
 - Obsolete / Rejected





Technology Stack Drivers

- A technology stack includes all of the hardware and software needed to create, support, maintain, test, deploy, run, backup, etc. agency solutions.
- For architecture reviews, technology stacks are divided into two logical pieces:





Technology Stack Drivers cont...

- Deployment stack all software
 (major focus) and hardware needed to
 deploy a solution (OS, database,
 portal, application server etc.)
- <u>Development/Support stack</u> all additional software needed to develop and maintain a solution (language, testing tools, etc.)





Technology Initiatives Drivers

 Initiative 1: Emphasize programs and tools that enable all citizens to interact with government safely and securely, with when, how, and where they want to interact.





Technology Initiatives Drivers cont...

 Initiative 2: Improve information-sharing and governance to derive quality information from data already collected.





Technology Initiatives Drivers cont...

 Initiative 3: Leverage technology to improve worker productivity and make state employment more attractive to the current and future workforce.





Technology Initiatives Drivers cont...

 Initiative 5—Expand technology platforms and productivity tools that support Virginia's goal of remaining the best managed state.





Technology Initiatives Drivers cont...

• Initiative 6—Support initiatives that will make Virginia the leader in IT security and risk management.

 Initiative 7—Expand and support enterprise and collaborative IT services.





Support Drivers

Vendors use different terms, but generally, there are 3 high-level software support lifecycle phases of interest:

 Mainstream – software is fully supported (security updates and hotfixes), new features can be added (Microsoft typically 5 years)



Support Drivers cont...

- 2. <u>Extended</u> no new features, software still has security updates and hotfixes (Microsoft additional 5 years).
- 3. <u>End-of-life</u> no security updates and hotfixes.





Architecture Review Approach

- Initial Review: Initial series of questions.
 - Agency completes initial questions in EA review submission.
- VITA EA reviews the initial submission.
 - -Provide applicable input where needed.
 - -Asks additional questions when needed.
 - -Completes review with approval or rejection.





EA Reviews Should Help Prevent...







Questions, Concerns, Comments?

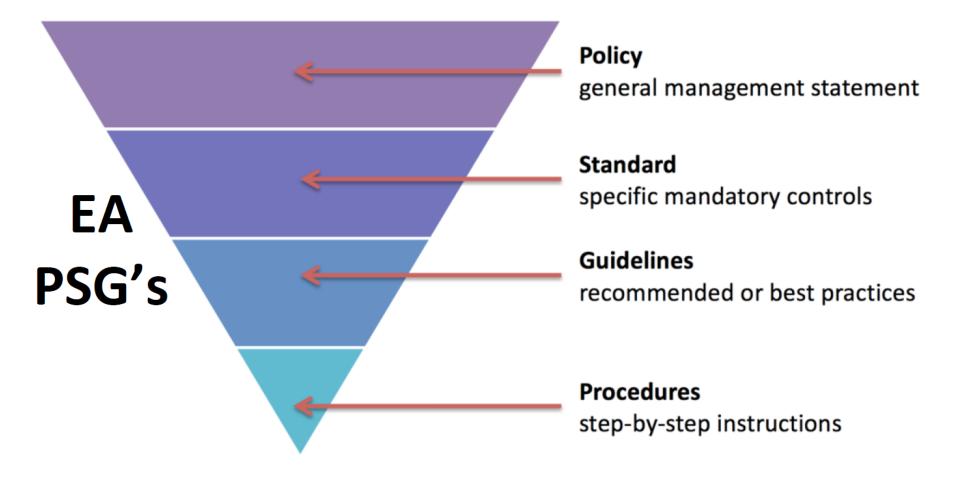
Contact: Robert Kowalke



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References

- Software Product Quality ISO/IEC 25010
- <u>Carnegie Mellon University Quality Attribute Workshop</u>
- TARA (Tiny Architectural Review Approach)
- **TOGAF Architecture Compliance Checklists**
- Stackoverflow architecture checklist questions





Strategy	Enterprise Architecture	EA Roadmap	EA Governance	Design Assurance	Compliance	Performance Monitoring
Business Strategy Support & Alignment (future)	Current State EA Model	Business Capabilities	Architecture Governance Board	Design Assurance services to programmes &	Compliance Assessments against future state	Collection of Performance Measures
ICT Strategy development	Future State EA Model	Capability Increments	Governance Decisions	projects (internal and external)	EA Model Managing	Progress Tracking
(Future) Business Change	 Production of Diagrams, 	Business Change Initiatives	 Mandates for programmes & projects created 	Architecture Reviews	divergence and Exceptions	Dashboards, Charts and Graphs for
Events (Current and in-flight)	Catalogues & Matrices to ensure quality and to	Business and IT capability	from approved Capability Increments provide	Formal EA approval at Quality Gates	 Issuing temporary Waivers 	MI/BI about EA Capability Maturity
 Business Motivation, Goals, Objectives 	answer questions	Increments aligned to Risks, Priorities,	High level Solution Models delivered to	 Informal Design Assurance support for Solution 	•EA Approval to continue to next phase	assessment against Strategies, Goals
Metrics & Measures	 Provision of Information, Advice and Guidance 	Funding •Key Inputs to	programmes & projects	Architects	EA intervention in	and Objectives
(KPIs/CSFs) • Architecture Vision	Conduct Gap, Traceability and	investment Proposals and Investment Board	Formal EA Approval required for projects	Policies & Guidelines	projects to ensure remediation and to resolve issues and	
Model Support for	Impact Analysis	Supports Business	to proceed to next stage in the change lifecycle	Standards Technical Design	ensure future compliance	
Strategic Planning	• Produce Recommendations	Engagement	Governance	Authority		
Support for Executive Board	Create Position	Key Inputs to Programme/Project	Process	 Evaluation of Vendors & Suppliers 		

EA Lifecycle (Ingenia)

papers on business

and IT trends

Portfolio Planning

queries